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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,514	09/25/2001	Aaron R. Kunze	10559-526001	3324
20985	7590	06/15/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			HYUN, SOON D	
			ART UNIT	PAPER NUMBER
			2663	
DATE MAILED: 06/15/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/965,514

**Applicant(s)**

KUNZE ET AL.

**Examiner**

Soon D. Hyun

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 8, 9, 11, 13, 15, 18, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawada et al (US 2002/0016858).

Regarding claims 8 and 13, Sawada et al (Sawada) discloses a method of routing a packet for a data routing device (a router 1000 in FIG. 10) comprising:

storing information (1201, 1202, 1203 in FIG. 12) in a routing data structure (a filtering table 1101 in FIG. 11 and 12), wherein the information selectively indicates that a packet having a destination address is to be routed or dropped by comparing the destination address of the packet with the routing information (paragraphs 0114 and 0016).

Regarding claim 9, the filtering table comprises a routing table (FIG. 12).

Regarding claims 11 and 15, Sawada further discloses that a format for the destination address is defined by ipv4 (paragraph 0112).

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Regarding claim 18, Sawada discloses a packet routing system (FIG. 10) comprising:

memory means (a filtering table 1101 in FIG. 11 and 12) for storing a data structure comprising a destination address (1201) routing table having entries, wherein one entry (1203) contains an indication that a packet having a destination address that resolves to the one entry to be dropped;

processing means (a packet processor 1102 in FIG. 11) for receiving a packet having a destination address from a first network (FIG. 10), for checking the destination address against the destination address routing table, and for transmitting the received packet to a second network only if the received packet does not resolve to the one entry (paragraphs 1004 and 0116).

Regarding claim 19, the filtering table comprises a set of tables (1201, 1203, 1203).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 10, 12, 14, 16, 17, and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada et al (US 2002/0016858).

Regarding claims 1, 14, and 23, Sawada et al (Sawada) discloses a data routing apparatus (a router 1000 in FIG. 10) comprising:

- a network interface (PHYS. IF 1002-1007) to receive data packets;

- a processor (a packet processor 1102 in FIG. 11) coupled with the network interface;

- a routing data structure (a filtering table 1101 in FIG. 11 and 12) to store information selectively indicating that the received data packet having a destination address (1201 in FIG. 12) is to be dropped (paragraph 0114).

However, Sawada does not explicitly teach a memory coupled with the processor (1102), the memory to instruct the processor to load the routing data structure as recited in the claims.

It would have been obvious to one having ordinary skill in the art to incorporate a memory contain a software (instructions) into the processor (1102) to implement the filtering procedure to take advantage of the using the software, and thus, the filtering table is loaded according to the instructions for determination of dropping.

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Regarding claim 2, the filtering table comprises a routing table (FIG. 12).

Regarding claim 3, Sawada further discloses that the packet entering into the router has a unique source address which is a predetermined value (paragraph 0099).

Regarding claims 4 and 10, Sawada does not explicitly teach whether the filtering table has a pointer to one entry (Forward/Discard Flag 1203 in FIG. 12).

It would have been obvious to one having ordinary skill in the art to incorporate a pointer for the table entry to speed a searching procedure associated with entries in the table.

Regarding claim 5, Sawada further discloses that the filter table comprises a portion of an address field (1201 and 1202 in FIG. 12).

Regarding claim 6 and 25, Sawada further discloses that the filtering table comprises a network identifier (a network address) in a destination address (1201 in Fig. 12).

Regarding claims 7, 12, 16, and 22, Sawada does not teach that the filtering table comprises a deprecated directed broadcast address. It would have been obvious to one having ordinary skill in the art to enter any kind of address into the filtering table for the processor to implement the filtering.

Regarding claim 17, Sawada does not teach that dropped packets are counted.

It would have been obvious to one having ordinary skill in the art to count the dropped packets for further management of the network., since the number of dropped packets could be a kind of statistics for system reliability and management.

Regarding claim 20, Sawada does not explicitly teach that the processor checks the destination address four bit at a time.

It would have been obvious to one having ordinary skill in the art to check the destination address four bits at a time if no unexpected results can be seen from the use of four bits at a time.

Regarding claim 21, Sawada further discloses that a format for the destination address is defined by Ipv4 (paragraph 0112).

Regarding claim 24, Sawada does not teach that the filtering table has an entry to indicate a next hop address, since a packet forwarding unit receives the packet from the packet processor (1102) for further routing.

It would have been obvious to one having ordinary skill in the art to incorporate an entry for the next hop address if the packet processor should forward the packet to an associated PHYS. IF (FIG. 10).

Sawada does not explicitly teach whether the filtering table has a pointer to one entry (Forward/Discard Flag 1203 in FIG. 12).

It would have been obvious to one having ordinary skill in the art to incorporate a pointer for the table entry to speed a searching procedure associated with entries in the table.

Sawada does not explicitly teach whether the filtering table has a value of negative one for the entry (Forward/Discard Flag 1203 in FIG. 12) to indicate the packet to be dropped.

It would have been obvious to one having ordinary skill in the art to use a value of negative one if no unexpected results can be seen from the use of the value.

Regarding claim 26, Sawada further discloses that the network identifier identifies a subnet (FIG. 13).

Regarding claim 27, Sawada further discloses that a format for the destination address is defined by Ipv4 (paragraph 0112).

Regarding claims 28 and 29, Sawada does not teach that the filtering table comprises a deprecated directed broadcast address. It would have been obvious to one having ordinary skill in the art to enter any kind of address into the filtering table for the processor to implement the filtering.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Hyun  
06/06/2005

  
**ANDY LEE**  
**PATENT EXAMINER**